



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,688	12/05/2003	John Kevin Liles	2003-0167	9077

7590

05/23/2005

Robert F. Frijouf  
Frijouf, Rust & Pyle, P. A.  
201 East Davis Boulevard  
Tampa, FL 33606

EXAMINER

HRUSKOCI, PETER A

ART UNIT

PAPER NUMBER

1724

DATE MAILED: 05/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/728,688

Applicant(s)

LILES ET AL.

Examiner

Peter A. Hruskoci

Art Unit

1724

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 May 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 29 and 30 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-30 are subject to restriction and/or election requirement.~

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

Art Unit: 1724

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-28, drawn to an apparatus, classified in class 210, subclass 199.
- II. Claims 29 and 30, drawn to a method, classified in class 10, subclass 726.

The inventions are distinct, each from the other because of the following reasons:

Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used in a materially different method such as a hydrocarbon recovery method.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Robert F. Frijouf on 5/3/05 a provisional election was made without traverse to prosecute the invention of Group I, claims 1-28. Affirmation of this election must be made by applicant in replying to this Office action. Claims 29 and 30 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Art Unit: 1724

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Barbini 4,111,402. Wiessenberg et al. disclose (see col. 10 lines 37-54, and Fig. 3) an apparatus for treating a liquid with a first and second chemical substantially as claimed. The claims differ from Wiessenberg et al. by reciting that one of the mixing devices includes a specific spirally twisted tube. Barbini disclose (see col. 2 line 66 through col. 4 line 64) that it is known in the art to utilize a mixing device with twisted tubes with helical corrugations, to aid in mixing a combination of liquids. It would have been obvious to one skilled in the art to modify the apparatus of Wiessenberg et al. by utilizing the recited mixing devices in view of the teachings of Barbini et al., to aid in mixing chemicals with the liquid. The specific cross-section of the tube utilized would have been an obvious matter of choice in engineering design to one skilled in the art, depending on the specific liquid treated and results desired, absent a sufficient showing of unexpected results.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Barbini 4,111,402 as above, and further in view of Bober et al. 5,695,645. The claim differs from the references as applied above by reciting that the second mixing device has a cross-section greater than the first mixing device. Bober et al. disclose (see col. 17 lines 6-59, and Fig. 7) that it is known in the art to utilize a series of tubular mixing devices with increasing tube diameter, to aid in mixing a liquid with a precipitating agent and flocculant. It

Art Unit: 1724

would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited mixing devices in view of the teachings of Bober et al., to aid in mixing a precipitating agent and flocculant with the liquid.

Claims 7, 8, 10, 11, 13, 14, 16-20, and 22-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Barbini 4,111,402 as above, and further in view of Sesay et al. 6,454,949. The claims differ from the references as applied above by reciting that the apparatus includes specific liquid and chemical feed pumps, respectively. Sesay et al. disclose (see col. 7 line 25 through col. 10 line 19) that it is known in the art to utilize pumps for adding chemicals and polymers and wastewater to mixing devices including a static mixer, to aid in removing metals from the wastewater. It would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited pumps in view of the teachings of Sesay et al., to aid in mixing chemicals with the liquid.

Claims 9 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Barbini 4,111,402 and Sesay et al. as above, and further in view of Bober et al. 5,695,645. The claim differs from the references as applied above by reciting that the second mixing device has a cross-section greater than the first mixing device. Bober et al. disclose (see col. 17 lines 6-59, and Fig. 7) that it is known in the art to utilize a series of tubular mixing devices with increasing tube diameter, to aid in mixing a liquid with a precipitating agent and flocculant. It would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited mixing devices in view of the teachings of Bober et al., to aid in mixing a precipitating agent and flocculant with the liquid.

Art Unit: 1724

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Sesay et al.. The claim differs from the Wiessenberg et al. as applied above by reciting that the apparatus includes specific liquid and chemical feed pumps, respectively. Sesay et al. disclose (see col. 7 line 25 through col. 10 line 19) that it is known in the art to utilize pumps for adding chemicals and polymers and wastewater to mixing devices including a static mixer, to aid in removing metals from the wastewater. It would have been obvious to one skilled in the art to modify the apparatus of Wiessenberg et al. by utilizing the recited pumps in view of the teachings of Sesay et al., to aid in mixing chemicals with the liquid.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wiessenberg et al. 6,368,511 in view of Sesay et al. as above, and further in view of Bober et al. 5,695,645. The claim differs from the references as applied above by reciting that the second mixing device has a cross-section greater than the first mixing device. Bober et al. disclose (see col. 17 lines 6-59, and Fig. 7) that it is known in the art to utilize a series of tubular mixing devices with increasing tube diameter, to aid in mixing a liquid with a precipitating agent and flocculant. It would have been obvious to one skilled in the art to modify the references as applied above by utilizing the recited mixing devices in view of the teachings of Bober et al., to aid in mixing a precipitating agent and flocculant with the liquid.


The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Art Unit: 1724

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter A. Hruskoci whose telephone number is (571) 272-1160. The examiner can normally be reached on Monday through Friday from 6:30AM-4:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duane Smith can be reached on (571) 272-1166. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Peter A. Hruskoci  
Primary Examiner  
Art Unit 1724

5/16/05